
XVIII. *Observations on some Species of British Quadrupeds, Birds, and Fishes.* By George Montagu, Esq. F.L.S.

Read December 20, 1803.

TO a society founded on so liberal a basis as the Linnean Society there needs no introduction to the miscellaneous writings of an individual, whose object can only be the diffusion of knowledge on partial subjects of natural history.

With this view I beg leave to lay before the Society the following observations on a few species of British birds whose history appears to be imperfectly known; together with a few additional remarks on two of our smallest quadrupeds; and a description of a beautiful fish, the *Cepola rubescens*, hitherto, I believe, not noticed on our coast; and of two other rare species.

HARVEST MOUSE.

Mus Messorius. *Shaw Zool.* ii. p. 62. *fig. vignette.*

Mus minutus. *Gmel. Syst.* p. 130. 8.?

Harvest Mouse. *Br. Zool.* i. p. 107.

Pennant Quadr. ii. p. 384.

White Selb. p. 33. 39.

This elegant little species of mouse, first noticed by Mr. White as inhabiting the corn-fields and ricks about Selborn, and, through his communication, first made public by Mr. Pennant as indigenous to England, is by no means confined to Hampshire; for we well remember it was common in the more champaign parts of Wiltshire in our younger days, and previous to the
discovery

discovery of it by Mr. White : and we have since those juvenile days found it in other parts of the same county, in Gloucestershire contiguous, and in the south of Devonshire.

Mr. White has very justly described its nest to be without any opening ; but this is not peculiar to that of the Harvest-mouse, for we have observed most of the species of this genus close up the opening every time they leave their young. We have more than once found the nest of this mouse containing young ; in one of which were five, sufficiently grown and covered with hair to distinguish them : this was placed above two feet from the ground among the branches of a dock, close to a hedge, early in the month of September. It must however be remarked, that the Wood-mouse of Shaw's Zoology sometimes makes its nest at a very considerable distance from the ground, having found it in the top branches of furze at least five feet high, and not uncommonly in woods : these are also destitute of any opening, even after they are deserted.

The Harvest-mouse appears to be a tender animal ; as our attempts to keep it alive in confinement have hitherto been unsuccessful. Like other field-mice, it burrows in the ground, where it retires during the colder months ; but we have seen some hundreds taken out of oat-ricks (their favourite abode), without any signs of torpidity at that season : in such a situation they appear to breed the greater part of the year.

Doctor Shaw has very justly remarked, in his description of the Minute-mouse, that it seems so nearly allied to this species as scarce to admit a specific distinction : indeed, if we consider the superior length of the fur in that mouse, a circumstance incident to a Siberian climate, as the only apparent distinction, there can be no reason why the synonyms of these mice should not be brought together.

WATER SHREW.

Sorex fodiens. *Gmel. Syst.* p. 113. 7. *Shaw Zool.* i. p. 534. t. 118.

Sorex bicolor. *Nat. Miscel.* t. 55.

Water Shrew. *Pennant Quadr.* p. 308. No. 236. *Br. Zool.* i. p. 125. t. 11. No. 33.

In addition to what has been said of this rare animal by the very respectable authors referred to, we beg leave to add, that it is an inhabitant of Devonshire, as Mr. N. Luscomb of Kingsbridge picked up a recently killed specimen in that neighbourhood, and which is now in our possession. This, which is a male, weighed three drams and a half: it differs a little from those generally described, as the throat and breast are pale ferruginous.

It was found about the time of the year that the annual mortality befalls the common Shrew, *Sorex araneus*; and, contrary to the usually supposed habits of which its name is indicative, was remote from water, upon one of the highest and most arid situations in the country, on a rocky bank. Whether it had been brought to that spot by an owl, or any other bird of prey, is not to be determined; but is not likely, as it had no marks of violence; nor is it usual for predaceous birds to carry their prey to so great a distance as this was found from a place suitable to a supposed amphibious animal: it is more probable that it sometimes rambles from its more usual haunts.

CIRL BUNTING.

Emberiza Cirrus. *Gmel. Syst.* p. 879. *Ind. Orn.* i. p. 401. 10.

Cirl Bunting. *Lath. Syn.* iii. p. 190.

Bunting, Cirl. *Orn. Diction.*

Since we made public the discovery of the Cirl as indigenous to the west of England, opportunity has thrown in our way the
means

means of becoming more intimately acquainted with its manners and habits, which may possibly be as interesting to a few others as they were to us, and therefore we beg leave to add the following particulars to the natural history of that bird.

About the middle of July we discovered a nest (on an old stump of a tree upon a bank) not quite finished, which we suspected to belong to this bird; and on visiting it again on the 25th we found that it contained four eggs, which proved to be those of the bird in question; two of these were taken away, and in a few days two others were deposited*, which, with the other two before left, were suffered to remain, in order to become acquainted, as much as possible, with the natural history of this species.

On the 12th of August we revisited the nest, and found the young had been hatched some days, as they could see, and had thrown out some stubs in the wings; so that the time of incubation could not have been more than twelve or thirteen days.

On the 15th we took two young ones from the nest, with a view of rearing them by hand, and left the others as a reserve, in case of failure: these birds did not thrive on bread and bruised turnip-seed, or such food as is generally given to the smaller hard-billed birds, the goldfinch, linnet, and others, and became so weak that they refused all sustenance. In this debilitated state we returned them to the nest on the 18th, and took the other two, which had prodigiously exceeded these in growth.

Observing on the side of the bill of one of the last taken, the *saltatoreal* leg of the common grasshopper, *Gryllus grossus*, it was a sufficient hint to procure as much as possible those insects for their food: and by the assistance of a little boiled flesh, beef or

* Whether it is unusual for this species to lay six eggs cannot be determined; but in the two or three other nests that have come within our knowledge, either with eggs or young, four or five only were found in them.

mutton, varied with bread soaked in milk, and boiled rice, they throve considerably: but it was observable, when the weather was wet, and grasshoppers could not be procured, especially if the goodness of the meat was not carefully attended to, that they became visibly weak: such was the case at one time that they lost the use of their legs after they had become perchers, which we attributed to the defect of insect food, and the meat that was usually cut for them having in warm damp weather turned sour; for, on instant recourse to grasshoppers in greater abundance, with less and perfectly fresh meat, they were soon restored to the use of their limbs.

Before these captive birds were capable of flying, a person was sent to the nest to see what was become of the two which had been returned so weakly; as at this time indisposition confined us within doors, and prevented the furtherance of a design of decoying the parent birds to the house by means of their young if they should be found alive in the nest, of which we had some doubts; but we were agreeably surprised to find that they had not only recovered, but had acquired so much superior growth to those under the care of foster parents, that only one was secured: this proved to be a female, as was plainly discernible on comparison, and at once bespoke the other two to be males. At first this refused all sustenance (as is usual with all young birds after the age of discriminating their parents), but by the example of the others gaping for food, it soon became familiarized to the hand that fed it.

As soon as they could peck (as it is termed), that is, when they were capable of picking up their own food, it became requisite to find out a proper substitute for soft meat; and what was most likely to be the winter provision of these hard-billed birds was resorted to: common grain, such as wheat, barley, and oats, were presented to them, as well as groats or husked oats, at the same time
allowing

allowing them a certain portion of egg boiled hard, and boiled rice: of this variety the egg, rice, and groats, were only eaten.

It was now thought proper to try the smaller seeds, such as hemp, turnip, rape, plantain, grass, and such like; for which they soon discovered a taste, but always preferred the white oats, when the groats and softer food were removed; and which consequently became their principal diet: the adroitness with which they husked, or deprived that grain of its outer coat, in order to swallow the more nutritious part, was remarkable: and it was observable, that wheat and barley were at all times rejected.

With a view to produce a hybrid between a male Cirl Bunting and a female Canary-bird, such were put together; but unfortunate accidents put a stop to our curiosity: we learned however by this attempt that canary seed, which had never before been offered, was preferred by the Bunting to all others, even its favourite oat.

One of the males and the female lived long enough to throw out their full plumage, which was effected about the latter end of November, but the plumage of the male was never so bright as in its native wild state: the only indication of the sexes, in their first or nestling feathers, was the light-coloured mark over the eye, which in the male was much more conspicuous, and more inclining to yellow.

The male survived the female some months; was always sufficiently tame to take insects from the hand, showing great partiality to such a repast, and when let out of the cage would catch flies in the windows; but it was excessively timid and shy of strangers, and greatly alarmed at any moving object the eye had not been accustomed to: it particularly showed more than usual abhorrence to any thing black, not suffering even those out of whose hand it would otherwise feed to approach its cage with a
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hat on, without violent efforts to avoid the displeasing object, by fluttering about in an extraordinary manner; and in this way it lost its life.

We must also remark, that the monotonous song of the male was so incessant, and so shrill and piercing to the ear, that at times it became insufferable: it resembles so much the vociferous call-notes of the Lesser White-throat, *Sylvia sylvicola*, that it requires more than ordinary knowledge in the language of birds not to be deceived. The female never uttered any thing but a simple plaintive note.

DARTFORD WARBLER.

Motacilla provincialis. *Gmel. Syst.* ii. p. 958.

Sylvia Dartfordiensis. *Ind. Orn.* ii. p. 517.

Dartford Warbler. *Lath. Syn.* iv. p. 437.

Warbler, Dartford. *Orn. Diction.*

In addition to the natural history of this bird, we beg leave to add, that we have observed it frequently in the southern parts of Devonshire since the 8th of September 1802, on which day several were seen; and the young readily distinguished from the adults by their paler plumage, even at a distance. These at times presented themselves to our notice till the latter end of January in the present year. Two that were shot about this time proved, by dissection, to be of different sexes; the plumage nearly alike, but rather darker in the male. In the gizzard were the *elytra* of some minute species of *Coleopterous* insects, and some small dark-coloured seeds.

They affect situations similar to those which we observed them to frequent in Cornwall; and no other place except in, or very contiguous to, thick furze, where they find the most secure shelter. They are not confined to one spot, but the most we observed were in a valley that opened to the sea, and not above two miles from it.

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In other parts a few have been seen, but always within a few miles of the coast; and it is remarkable, in the very extensive tracts of furze with which this country abounds, that we could not meet with this bird, except in two or three places. Possibly their locality and shyness may have hitherto eluded our search for them in the breeding season; and hopes may yet be entertained of proving that they actually breed with us, if, as we are assured, they do in Provence; for we cannot reconcile their coming to us in the winter from a more southern climate.

RINGED PLOVER.

Charadrius Hiaticula. *Gmel. Syst.* p. 683. *Ind. Orn.* ii. p. 748.

Ringed Plover. *Br. Zool.* ii. No. 211. *Lath. Syn.* v. p. 201.

Plover, ringed. *Orn. Diction.*

In the *Ornithological Dictionary* it will be seen that some doubts are entertained whether the Alexandrian Plover, *Charadrius Alexandrinus* of Linnæus, and the Kentish Plover of Lewin, are not really varieties only of the Ringed Plover: such doubts cannot but exist with those who have had the same opportunity of examining the number of specimens we have at all times of the year; and we confess that additional and more recent observations have so strengthened our former conjectures, as to leave the mind with scarce the shadow of a doubt that they are actually one and the same species.

When the size and weight, the manners and habits of similar birds are consulted, and found to be the same; when the plumage of such is so nearly alike, except in a few markings, which are variable by age and season; when gradations are to be traced from the markings of one to that of the other, and when such birds always congregate together; we must be naturally led to

conjecture, that naturalists, who have not had the opportunities of attending them in their native haunts, and have only examined a few individuals, perhaps in their extreme dissimilitude of plumage, might, without committing their scientific knowledge, describe them as a distinct species. It must, however, be acknowledged, that the actual criterion is the tracing of such doubtful subjects through their several changes, from the nestling to the adult: such has been our usual plan where opportunity permitted.

On the present question, were it not for the strong chesnut colour the Kentish Plover is said to possess on the crown of the head, as described by Lewin, and since by Dr. Latham in the Second Supplement to the *General Synopsis*, we should not have hesitated in pronouncing these three birds to be only one species; for the marks on which so much stress of discrimination and distinction is laid by some, particularly by the writers of a periodical publication, will by no means hold good, not only with respect to this, but also to many other species of birds, as we can prove from ocular demonstration. There is indeed nothing more vague and indeterminate than the colour of the legs and bill; a circumstance that has led already to much confusion, and of which we beg leave to put the young and unexperienced ornithologist upon his guard.

It would be endless to adduce instances of these uncertain marks, more or less changing by age and season, so well known to those who search for truth amongst Nature's native stores: the examples of the Black-headed and Herring Gulls, hereafter mentioned in this paper, are sufficient to show the care requisite in admitting the colour of those parts as the only specific distinction.

The colour, therefore, of the head alone, in what is described as
the

Kentish Plover, is the only circumstance that could stagger our opinion; and we must still conjecture that the bird figured by Lewin is only an accidental variety; for it is admitted in the Second Supplement to the *General Synopsis* (the author of which sent the description to Lewin), that this part of the bird has its gradations. In the first described specimen the top of the head is ferruginous-brown; and with respect to the two other specimens, killed in the month of April, it is stated that "in one of them the whole nape was of a fine pale reddish bay, the other pale brown, inclining to bay towards the nape."

Here then we come as near as possible to the plumage of the generality of the Ringed Plovers in their adolescent state; for in every other part it exactly accords.

We shall now take leave of these birds, for the present, by remarking, that we have repeatedly taken the young of the Ringed Plover before it could fly, and, we believe, in all the usual intermediate changes of plumage in every month in the year; and we do assert, that in its infant state the legs and bill are not yellow, though paler than they are after it has attained the power of flying, when they become of a dusky brown, and continue that colour for a considerable time, changing by degrees to a yellow-brown, and lastly to an orange-yellow; but this last is never effected till the plumage is complete, and is always the last mark of perfection.

At this time (January) we have before us fresh specimens of this species, with all the marks of adults, except that the bill and legs do not possess the full yellow; at the same time we have others agreeing with the Alexandrian and Kentish Plovers, but with the crown of the head pale brown, some more or less tinged with rufous; and the white, which passes over the eye from the forehead, not quite running into the ring of that colour round the neck,

but in some so near it as not to admit of a specific mark of distinction: the bill and legs dusky.

In cases of this nature we can only form opinions upon long and continued observations, noted with care and circumspection: upon such observations, therefore, we found our opinion, though it would be difficult to produce more than strong presumptive proof on such a question; but by pointing out our suspicions, we may stimulate others to join in the pursuit of investigating such abstruse subjects.

BLACK-HEADED GULL.

Larus ridibundus. *Gmel. Syst.* p. 601. *Ind. Orn.* ii. p. 811.

Black-headed Gull. *Br. Zool.* ii. No. 252. *Lath. Syn.* vi. p. 380.

Gull, black-headed. *Orn. Dictionary*.

From the very great confusion which seems to have arisen in some species of the Gull tribe, occasioned by a very considerable variation in plumage at different ages and seasons, we trust it will not be unacceptable to this Society and to the critical ornithologist, if from long and strict attention to several of this genus, which for many years have almost daily been presented to our view, we should endeavour to clear away a little more of that mist which has, for so long a period, veiled in obscurity those birds which are usually known by the names of Black-headed Gull, *Larus ridibundus*, Red-legged Gull, *Larus cinerarius*, Brown-headed Gull, *Larus erythropus*, Brown Tern, *Sterna obscura*, all of the Gmelinian system; and the Brown Gull of the Second Supplement to Latham's *General Synopsis*.

It is a claim which science has upon the naturalist—the endeavour to elucidate any of the more obscure objects of the creation: in our attempt, therefore, to throw light upon a subject which has caused so many various opinions, we beg leave to say,
that

that from a long acquaintance with the objects in question, we have no scruple in asserting, that the three first and the last are, without doubt, one and the same species, and that the other has been confounded with it.

To those who are not well acquainted with the subject, it may appear arrogant and presumptuous to call in question the opinions of so many respectable authors; but we trust we shall, from an intimate acquaintance with the bird in question, in all its various changes from the young to the adult, be able to prove, and lay before the Society, sufficient grounds of reason for an opinion so greatly at variance with that of so many more able ornithologists.

In the *Ornithological Dictionary* we thought sufficient had been said, under the article Gull black-headed and red-legged, to have cleared away the greater part of such obscurity; but we since find in the work of our estimable friend, and one of the greatest ornithologists of the age, which made its appearance about the same time as the former (from which circumstance, unfortunately, no advantage could be reaped from that valuable source), that the Brown Gull, with reference to the Brown Tern of authors, is there given as a distinct species. It does not, however, appear that this author saw the bird in question, but that the description was sent to him by a very able naturalist, our late worthy and much to be lamented friend Mr. Boys; and a very accurate description it is. That the bird should have been considered by him as that which had been so long in obscurity under the title of Brown Tern, as handed down to us by Ray and Willughby, is not surprising; and that Dr. Latham should fall into such an opinion is not more extraordinary; on the contrary, it was very natural, and possibly this may be the identical bird: but be this as it may, it becomes requisite to show that the bird which now stands as a distinct species

species in the Second Supplement to the *General Synopsis*, under the title of Brown Gull, is no other than the Black-headed Gull in its adolescent state; and it becomes the more necessary to clear up this point, as it is stamped with such high ornithological authority, which might lay a foundation for more confusion in this very intricate class.

To point out the errors of our friends, for whom we have the highest regard, would, indeed, be a task ill suited to our pen, were we not, from long habits of intimate friendship with both these gentlemen, well aware of the purity of their writings, and that nothing would afford them more pleasure than the furtherance of science, by clearing up the doubts existing by well grounded facts.

In the former works of my friend Dr. Latham, he had been induced to fall into the opinion of other authors, and made some of the varieties of the Black-headed Gull distinct species. In his *Index Ornithologicus*, however, he has very judiciously brought the *L. cinerarius* and *erythropus* of Gmelin, together with the *ridibundus*, as mere varieties; but suffers the *Sterna obscura* to remain a distinct species, although he expresses a doubt whether it may not be a young of some one of the Tern or Gull genus.

Thus the Doctor had cleared away much of the obscurity; and it only remains to restore the Brown Gull to its proper place, as the young of the Black-headed species, and scarce differing in plumage from the state in which it is described as the Brown-headed.

Whether the Brown Tern of the older naturalists is a Tern or a Gull is perhaps a doubt; for, as the young of the former do not remain with us long after they are capable of flying, we cannot ascertain their several changes in plumage; though we ought, perhaps, to give them credit, and admit it was a Tern, but not a distinct

distinct species. So with respect to the Brown Gull, whether it is or is not the Brown Tern of older authors is of no importance, as at any rate it is an immatured bird, and alike ought to be expunged from the works on ornithology as a distinct species.

Since the perusal of Dr. Latham's last valuable work, we sent him the bird in question, bearing every mark of that described by him as the Brown Gull; and we believe the Doctor is thoroughly satisfied with our observations upon it.

It is indeed remarkable that a bird bearing such strong marks as the Black-headed Gull, in all the changes, from the nestling to the adult plumage, should have ever been multiplied into so many species; as it is in its various stages readily ascertained by the superior whiteness of many of the first quill feathers, especially on the outer webs, and the greater coverts immediately impending them; which is very conspicuous when the wings are extended, and an obvious distinguishing mark from all others, even when flying.

In order to elucidate the subject more clearly, we shall here subjoin a description of the several remarkable changes incident to the Black-headed Gull, which a long and intimate acquaintance from daily observation has warranted us to assert, and from which it will appear evident, that one of those mutations is the identical bird in question, the Brown Gull of the Second Supplement to the *General Synopsis*. In making any part of the history of this intricate class of birds more clear, by endeavouring to bring them into the limits of truly definable distinction, we do not arrogate superior knowledge on the subject, except so far as favourable situations, and a strict attention to a favourite pursuit, have conspired to develop truth and undeniable facts.

Without detailing the various synonyms of authors for this bird in its several changes of plumage, we shall only have recourse to
a few

a few quotations, particularly the *Ornithological Dictionary*, where references may be found under its various denominations; and to the *General Synopsis*, as well as to Gmelin's *Systema Naturæ*, for the more copious: and in order to render the subject more clear, we shall begin with a short description of the Black-headed Gull in its first, or nestling feathers, or as it first appears on our shores after having quitted its place of nidification; and trace it through the various changes till it arrives at full maturity, which we are inclined to believe, in this and some of the smaller species of the same genus, is effected in one year*.

In the first plumage the feathers are more or less mottled with brown and white, which in a short time after leaving the nest are displaced by those which are wholly white underneath; the head becomes white, with an obscure spot behind the ear; but the back scapulars and coverts of the wings continue mottled longer.

In this state, therefore, it comes nearest to the description of Ray's Brown Tern, which had the whole under side white; the upper brown; the wings partly brown, partly ash-colour: but then he expressly says the head is black; a circumstance which never occurs in this bird while it has any brown feathers remaining on its back, and therefore cannot be referred to.

The second material change brings it to the Brown Gull, *Lath. Syn. Sup. ii. p. 331.* to which we refer for a comparative description; and which so exactly accords with the following, taken from a recent specimen we killed on the 12th of February last on purpose to send to Dr. Latham, that there can be no doubt of their being the same.

* Many of the larger species are, no doubt, three years or more becoming perfect: a Herring Gull, which has now been four years and a half in our possession, still retains a few black markings down the shafts of the tail feathers; the head and neck streaked with dusky; and the bill pale, indicating a change to yellow, but the tip still dusky.

Length

Length, thirteen inches and a half; breadth, thirty-seven; weight, eight ounces and three quarters. The bill one inch and a quarter in length to the feathers on the forehead; the base red orange, tip dusky black; irides dusky: a black spot at the anterior corner of the eye; another behind the ear; crown of the head mottled dusky and white; forehead, and all the under part, white; back of the neck grayish-white: back, scapulars, greater coverts of the secondary quills, and some of the upper series of the smaller ones near the shoulder, gray: several rows of the middle series of coverts brown, edged with dull white; the two first prime quills are white, margined on both webs with black; in the third the white increases on the outer margin, and the black at the tip; and at the fifth feather the white part becomes pale gray, and the dark parts increase on the inner web, and become more dusky; secondary quills dusky near their ends, margined with gray; tertials brown; the feathers of the spurious wing are dusky, slightly tipped with white: the ridge of the wing below that, and the three or four larger coverts adjoining, are wholly white; the rest of the greater coverts, impending the prime quills, more or less brown: the outer feather of the tail quite white, the next with two black, or rather dusky-brown, spots at the tip; the rest white, tipped with the same for rather more than half an inch, the ends slightly edged with dirty white: legs and feet dull orange-red.

The next change brings it to the Brown-headed Gull. *Lath. Syn.* vi. p. 383. *Larus erythropus Gmel. Syst.* ii. p. 597. *Larus ridibundus Ind. Orn.* ii. p. 812. *var. γ.* and in the *Orn. Diction.* will be found under Gull-brown-headed to refer to Gull-black-headed.

In this there is no material difference from the last, except that the legs have attained their perfect colour (red), and the head

assumes more of the dusky or brown feathers than usual; while the middle coverts of the wings retain the mottled brown, and the tail the dusky bar at the end. This, though we consider it as an irregular change, may be admitted as an unusual variation in the gradations commonly observed; for scarce an instance is to be found but what the brown scapulars and middle series of the wing coverts are changed for those of gray, and the tail becomes wholly white before the head is so much as covered with dusky feathers, or the legs become more than reddish.

The fourth change is that which has been generally known by the Red-legged Gull. *Lath. Syn.* vi. p. 381. *Larus cinerarius Gmel. Syst.* ii. p. 597. *Larus ridibundus Ind. Orn.* ii. p. 812. *var. β.* and in the *Orn. Diction.* is given under the title of Gull-red-legged with a reference to Gull-black-headed.

In this change, which brings it so near maturity, we find a very material difference; for not only the scapulars and coverts of the wings are become gray, but the bar at the end of the tail is lost, and that part assumes a pure white; the legs and bill also become of a fine purplish red; these last, however, grow darker as the spring advances, and the black increases on the head, a circumstance we believe peculiar to the breeding season, when that colour spreads over the whole of the head, taking in the throat; and in this, the most perfect or adult state, it is the Black-headed Gull. *Lath. Syn.* vi. p. 380. *Larus ridibundus Gmel. Syst.* ii. p. 601. *Ind. Orn.* ii. p. 811. 2. and the Gull-black-headed of the Ornithological Dictionary.

Having now traced the Black-headed Gull through its various stages of plumage, after long experience and investigation, we trust the numerous synonyms will, in future works on Ornithology, be concentrated to one species, *Larus ridibundus*.

THORACIC



Cepola rubescens

THORACIC FISH.

CEPOLA RUBESCENS.

Gmel. *Syst.* iii. p. 1187.

Turt. Linn. i. p. 739.

Tab. XVII.

Long, slender, smooth, subpellucid, somewhat compressed sideways, tapering from the head gradually to the tail: head not larger than the body, sloping from the eye to the end of the upper jaw: the under jaw longest, sloping upwards; mouth large; both jaws furnished with one row of distant, subulate, curved teeth at their very edge, the front ones projecting forward: eyes large, placed high up in the head; irides silvery mixed with crimson; pupil blue-black; gill coverts composed of two plates; branchiostegous rays four: pectoral fins small, rounded, consisting of sixteen rays: ventral small, oval, with six rays; the first short and spiny, with a filament adjoining longer than the other rays, and detached from them; these fins are close together, and rather before than immediately under the pectorals: the dorsal fin commences just behind the head, immediately above the opening of the gills, and continues without a division to join the tail, consisting of about seventy rays: the anal fin commences just behind the vent, which is scarce an inch from the ventral fins, and continues, like the dorsal, to join the tail; this has about sixty-one rays: the caudal fin is lanceolate, the middle ray being much the longest and gradually shortening on each side, till the distinction is lost in the dorsal and anal fins, and is composed of about twelve rays: the tongue is short, and with the palate is smooth; lateral line a little curved near the head, and afterwards runs quite

2 P 2

straight

straight to the tail: skin smooth, but when examined by a lens appears finely punctured.

Colour pale carmine, darkest above and towards the tail; gill plates and undulated transverse lines along the sides, silvery; fins of the same colour as the body, except the ventral, which are nearly white.

Length, ten inches; depth behind the head rather more than three quarters of an inch; breadth, half an inch.

The specimen of this elegant fish, from which the description and annexed figure were taken, was caught in Salcomb bay, on the south coast of Devonshire, on the 25th of February 1803.

It appears to differ a little in the characters given of the genus, for it has only four branchiostegous rays; but we suspect this circumstance is not always to be depended on.

Gmelin seems inclined to think this a variety of *Cepola Twnia*; but that is out of all question, as the body of this species is not carinated on each side, nor has the lower jaw a double row of teeth; and in other particulars it differs*.

TOOTHED GILTHEAD.

Sparus niger. *Turt. Linn.* i. p. 789.

Brama marina cauda forcipata. *Raii Syn. Pisc.* p. 115. n. 4.

Will. Ichth. t. V. 12.

Sparus Raii, La Castagnole. *Bloch. Ichth. Pt.* 8. p. 75. pl. 273.

La Castagnole. *Duham. Trait. de Pech. t.* 3. p. 26. pl. 5. f. 1.

Toothed Gilthead. *Br. Zool.* iii. p. 243. t. 43.

* Since the above was written, another specimen was brought to us from the same place: this was taken on the 25th of March. It was an inch longer, but not quite so deep; the branchiostegous and fin rays corresponded exactly; the colour was rather darker, and the base of the dorsal fin inclining to orange. This is probably a male, the other a female.

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